

**8-1 GENERAL:** In order to replicate the doctrinal distance between the CSA/DSA, BSA and forward units MSR's (supply routes) will be established by the DTOC IAW HICON orders issued to the BLUFOR units. All BLUFOR units will observe restrictions and constraints on the routes and are not authorized to use any other routes) to move personnel or supplies unless approved by the Commander, Operations Group or his designated representative and DTOC.

**8-2 Combat Health Support (CHS):**

**a. Distribution of Casualties.**

(1) MILES Casualty Card (MCC): the MILES casualty cards are issued by O/Cs following the safety briefing. All soldiers participating in the rotation must have a MCC with an assigned O/C Battle Roster Number (BRN). All MCC must have O/C initials verifying that the safety briefing was received. Additionally, COBs and role players will be issued casualty cards and will implement them if they become casualties. Evacuation of civilian or role player casualties will be IAW the Law of Land warfare and unit SOP.

(2) MILES Casualty Cards fall into one of the following five categories.

(a) Return To Duty (RTD). Soldiers with an RTD casualty card must receive self aid/buddy aid and do not require evacuation to an Medical Treatment Facility (MTF). RTD casualties cannot continue combat operations until an O/C verifies that self aid/buddy aid has been properly rendered. Once verified, the O/C will re-key his MILES harness and allow him to return to duty.

1. See Chapter 2, paragraph 2-3.q. and paragraph 2-8.k.3. for RTD authorized actions and constraints.

(b) Wounded (W). Soldiers which have WIA casualty cards (marked with a "W") must receive proper treatment from qualified unit medical personnel (MOS 91). The soldier must be evacuated to a echelon I or II medical treatment facility within 24 hours. Walking wounded casualties may be reconstituted at the battalion aid station and returned to duty. Wounded casualties sustained by units in the Brigade Support Area will be held at the FSMC for a minimum of six hours.

(c) Priority. Soldiers with casualty cards which designate they are

priority must receive proper medical treatment from qualified unit medical personnel (MOS 91). In addition they must be treated by battalion aid station (BAS) personnel capable of the advanced trauma life support (ATLS) procedures. This must be verified by a MEDICAL O/C, within two (2) hours. If the priority casualty is initially seen and properly treated by a combat lifesaver (CLS), emergency medical technician (EMT) and/or combat medic (CM), the CLS, EMT, or medic must annotate the MILES card with "CLS", "EMT" or "CM" and the time treatment was rendered. Aid Station O/C's will validate CLS/EMT/medic treatment upon casualty arrival at the aid station. This will increase the casualty's evacuation time from 2 hours to 4 hours. Certified CLS and EMT will be identified by having their aidbag and appropriate Class VIII materiel available to perform the necessary procedures. Once the casualty receives treatment at the battalion aid station (BAS) and the O/C has signed the MCC, the casualty receives an additional 4 hours to arrive at the Forward Support Medical Company (FSMC). Priority casualties sustained by units in the Brigade Support Area will be held at the FSMC for a minimum of six hours.

(d) Urgent. Soldiers with casualty cards which designate they are urgent must receive proper medical treatment from qualified unit medical personnel (MOS 91). They then must be treated by BAS personnel capable of performing ATLS procedures within one (1) hour. Casualties receiving appropriate treatment by a CLS or CM prior to arrival at the BAS will have an additional 1 hour added to their evacuation time, for a total of 2 hours from time of injury to BAS before being assessed DOW. Once the casualty receives treatment at the battalion aid station (BAS) and the O/C has signed the MCC, the casualty receives an additional two (2) hours to arrive at the Forward Support Medical Company (FSMC). Urgent casualties sustained by units in the Brigade Support Area will be held at the FSMC for a minimum of six hours

(e) Killed In Action (KIA). Casualty must be evacuated to the Mortuary Affairs in the Brigade Support Area (BSA). KIAs cannot provide assistance to the unit. Drivers and TC's that have the requirement

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to remain with their vehicles will receive a KIA, Remains not Found (KIA RNF) MCC. These individuals will not be evacuated to Mortuary Affairs in the BSA. The KIA must be reported and a requisition for a new soldier be placed by the BSA before these soldiers will be reconstituted with their vehicles.

#### **CMTC Medical Evacuation Time Chart**

<b><u>Category</u></b>	<b><u>Echelon I</u></b>	<b><u>Echelon II**</u></b>
RTD	N/A	N/A
WOUNDED	24 Hours	N/A
PRIORITY	2 Hours*	4 Hours
URGENT	1 Hour*	2 Hours

\* Time is doubled when casualty properly treated by a CLS or Combat Medic

\*\* Time from Treatment being rendered at Echelon I facility to arrival at FSMC. Times are not cumulative.

(f) NBC Casualties. Any individual taking improper protective measures will be assessed as an NBC casualty. O/Cs may assess NBC casualties based on protective equipment failures. In addition, casualties will also be assessed in the downwind vapor hazard area for incorrect actions. There will be instances when both casualty cards will be in effect. See Chapter 9, Table 9-3 for criteria for assessing NBC casualties.

b. **Medical Evacuation.** All casualties requiring evacuation will be physically transported to the medical treatment facility manned and equipped to provide the appropriate level of care.

(1) Wounded in action personnel: WOUNDED (W), PRIORITY, and URGENT, excluding RETURN TO DUTY (RTD) will be evacuated IAW current doctrine. When litter casualties are transported by a non-standard evacuation vehicle instead of an ambulance, the casualties must be loaded and unloaded from the vehicle by use of a standard or improvised litter. Once loaded, they must sit in the vehicle troop seats (for safety purposes). All litter casualties will be loaded, unloaded, and manually carried in a standard or improvised litter during all MEDEVAC-related operations.

(2) Non-standard vehicle loads will be limited to the number and type of casualties that could be realistically loaded without causing further injury to the casualties. At no time will soldiers be placed in any situation that would compromise their safety.

(3) Each casualty requiring transportation by litter must have a dedicated standard or improvised litter accompany them throughout their movement in the evacuation system. The unit may carry or drag litter casualties by one or two men but only to protected (covered) areas. The unit can use a one or two man carry to move a casualty in an emergency situation where litters are not available and vehicles cannot get to the patient. The O/C will assess the casualty as a DOW casualty if the carry causes further injury.

(4) Casualties transported in a vehicle that strikes a mine or is disabled in a direct or indirect fire engagement will have their MILES Casualty Card category upgraded one level. "Urgent" casualties will be reassessed as "KIA"; "Priority" casualties will be reassessed as "Urgent" casualties; "Wounded" casualties will be reassessed as "Priority" casualties. The initial time of injury will be maintained; only the severity of injury will change.

(5) KIAs are evacuated to Mortuary Affairs. KIAs will utilize troop seats while being transported. If a trailer is designated to carry KIAs, individuals will ride in the prime mover; transporting personnel in trailers is forbidden.

(6) Personnel KIA in the BSA (FSB and Field Trains) will be held at Mortuary Affairs an additional 12 hours, once all paperwork has been processed. This applies only to KIAs in BSA units and does not apply to units/personnel outside the BSA.

c. **Treatment and Supplies.** The BLUFOR unit must have the required medical supplies necessary to treat and sustain casualties during the treatment and evacuation process. These medical supplies must either be applied or, in some circumstances, simply accompany the casualty during evacuation. These "expended" medical supplies may be collected by the BLUFOR unit at the FSMC for packaging and resupplying medical units.

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It is a unit responsibility to requisition Class VIII medical supplies, as is required. The BLUEFOR unit is responsible for ALL aspects of managing Class VIII supplies.

d. **Died of Wounds (DOW):** Walking wounded or litter casualties, will be declared "Died of Wounds" (DOW) when:

(1) The casualty receives improper medical treatment.

(2) Improper transportation methods are utilized in an evacuation phase.

(3) Casualty evacuation times are not met.

(4) After verifying, the MILES card is annotated with DOW, the O/C will require the unit to transport these personnel back to the Mortuary Affairs Point located in the BSA.

(5) Personnel who become DOW will not be available for release to the unit for a minimum of 24 hours.

(6) DOWs 24-hour time penalty begins with time/point of injury. They still must be evac-ed to the Mortuary Affairs. If the process is completed within 24 hours they will not be released back to the unit until 24 hours from the time of injury has expired. If they exceed 24 hours the unit must still continue the evacuation to Mortuary Affairs before the soldier is released back to his/her unit.

#### 8-3 Personnel Reporting/Replacement:

a. **General:** A DA Form 1156, Casualty Feeder Report, will be completely processed through personnel channels for all evacuated casualties IAW the unit's personnel actions SOP. No casualty replacement personnel will return to units until after DA Form 1156 and all other appropriate personnel requisition paperwork has been completely processed through the personnel replacement system.

b. **Strength Accountability.** The unit S1 will provide current personnel strength (battle roster) and task organization, face to face, to his/her counterpart O/C prior to deployment into the maneuver box.

c. **Casualty Reporting.** At CMTC, all units operating in support of the task force will report to the Brigade Rear CP as its higher headquarters. For example: Units will provide casualty estimates, DA Form 5367-R (PRR) to the Brigade Rear CP before replacements can be processed. The Brigade Rear CP will either be the actual

Brigade S-4 or a CMTC role player (Brigade Tactical Operations Center—BTOC) located in Bldg. 100.

#### d. **Individual Reconstitution Procedures.**

(1) Brigade Headquarters and Forward Support Battalion available as "in the box" players.

(a) After processing through FSMC or Mortuary Affairs, soldiers are available to be integrated as replacements through the Brigade S1 (Rear CP).

(b) An O/C at the Brigade Rear CP will rekey all replacement personnel individually, after the unit has correctly processed the PRR (DA Form 5367-R Part 2), and he/she has verified the MILES Casualty Card.

(2) CMTC Role Player performing duty as the Brigade Headquarters, BTOC, and Forward Support Battalion NOT available as "in the box" players.

(a) All KIA and WIA soldiers are evacuated to the Field Trains (KIA evacuated to the Mortuary Affairs point, as appropriate).

(b) Battalion/Task Force CTCP or FTCP reports casualty losses to the BTOC.

(c) BTOC receives casualty reports from the CTCP or FTCP. The BTOC screens the data for accuracy. A Maneuver O/C Team Logistics O/C picks up casualty reports at the BTOC at the following times: Change of Mission + 4, +7, and +10. The BTOC will contact the Maneuver O/C Team Logistics O/C if any additional casualties are reported after Change of Mission + 10.

(d) The FTCP forwards DA Forms 1155 and 1156 to the BTOC. DA Forms 1155 and 1156 are passed from the BTOC to a Maneuver O/C Team Logistics O/C.

(e) An O/C at the FTCP rekeys all replacement personnel, after verification of MILES casualty card and DA Form 1155/1156 data.

(3) CMTC Role Player performing duty as the Brigade Headquarters, BTOC, and Forward Support Battalion is available as "in the box" player.

(a) All KIA and WIA soldiers are evacuated to the Forward Support Battalion (KIA evacuated to the Mortuary Affairs point, WIA evacuated to the C Company).

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(b) Battalion/Task Force CTCP or FTCP reports casualty losses to the BTOC.

(c) BTOC receives casualty reports from the CTCP or FTCP. The BTOC screens the data for accuracy. A Brigade O/C Team Logistics O/C picks up casualty reports at the BTOC at the following times: Change of Mission +4, +7, and +10. The BTOC will contact the Brigade O/C Team Logistics O/C if any additional casualties are reported after Change of Mission +10.

(d) The FTCP forwards DA Forms 1155 and 1156 to the BTOC. DA Forms 1155 and 1156 are passed from the BTOC to a Brigade O/C Team Logistics O/C.

(e) A Brigade O/C at the Rear CP/FSB TOC rekeys all replacement personnel, after verification of MILES casualty card and DA Form 1155/1156 data.

e. **Unit Reconstitution Procedures.** The Senior O/C may determine, based on the tactical situation, that the unit or a portion thereof will be totally replaced (for example, the unit gets over-run). In this situation, the S1 or surviving unit representative completes a unit battle roster identifying those individuals that are accounted present for duty, WIA, or KIA, and those individuals on whom the status is unknown (MIA - all others). The roster is provided to the S1 O/C for unit reconstitution. The S-4/BTOC must fully account for all vehicles. When all vehicles, crews and other personnel are fully accounted for and a complete PRR is completed and turned in to the Bde S-1 or BTOC, then rekeying of personnel and vehicles may begin. Unit reconstitution will not affect SBDA and/or contaminated vehicles, or DNB (Bite card or real world) casualties.

#### 8-4 Vehicles/Maintenance:

a. **General.** SAWE-RF/MILES II allows for five types of Battle Damage Assessments (BDA): catastrophic, mobility, cheat, commo, and firepower.

(1) TF S4 requests replacement vehicles and equipment IAW unit SOP to the BDE S4 (if BDE Rear CP is "in the box"), or to the BTOC (if BDE Rear CP is not "in the box").

(2) TF S4 reports the combat loss to the Combat Trains O/C with the following information: Co/Tm, vehicle Type, bumper #

and time reported to BDE. The Combat Trains O/C must monitor the vehicle replacement process to ensure that the training unit has vehicles rekeyed IAW their reports and the Senior O/C's guidance.

(3) Destroyed vehicles remain in place until change of mission. At change of mission, O/Cs collect all destroyed vehicles and control their movements until reconstitution.

(4) Combat load ammunition on board destroyed vehicles, will be considered serviceable, once the vehicle is rekeyed. Cross leveling to or from a destroyed vehicle awaiting rekey is not permitted. See Chapter 4, Paragraph 4-12.n for M109A6 and FAAS-V ammunition composition on WSRO vehicles.

(5) The FSB O/C will rekey FSB vehicles 18 hours after the FSB S4 or S4 representative returns the vehicle replacement card to the FSB O/C. FSB vehicles operating in the Task Force area of operations (Ambulance Exchange Point vehicles, Maintenance Contact Team vehicles, etc.) will be rekeyed without the 18 hour time penalty.

(6) **When brigade headquarters and Forward Support Battalion is available as an "in the box" player:** Upon notification of loss to BDE S4, the BDE Log O/C will provide the BDE S4 with a vehicle replacement card. The BDE S-4 will complete the card and the BDE Log O/C will verify the information and pass the card to the Support Operations Section. The Task Force will pick up the card from the Supply Company. Once the card is forwarded to platoon level, the platoon O/C will re-key the appropriate vehicle, once continue/change of mission is called.

(7) **When CMTC Role Player performing duty as the Brigade Headquarters, BTOC, and Forward Support Battalion are NOT available as "in the box" player:** The TF S4 will send the request to the BTOC S4. The BTOC S4 will contact the TF Log O/C and have him issue a replacement vehicle card to the TF S4. The TF S4 will complete the card and the TF Log O/C will verify the information. The TF S4 will forward the card to the appropriate platoon. Once the card is at the platoon the platoon O/C will rekey the appropriate vehicle, **once continue/change of mission is called.**

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(8) **When CMTC Role Player performing duty as the Brigade Headquarters, BTOC, and Forward Support Battalion is available as "in the box" player:** The TF S4 will send the request to the BTOC S4. The BTOC S4 will contact the Brigade O/C in the BSA and have him issue a replacement vehicle card to the Support Operations Officer (SPO). The FSB SPO will pass the card to the FSB Supply Company. The Task Force supply representative will pick up the card from the FSB Supply Company and send the card to the appropriate platoon. Once the card is at the platoon, the platoon O/C will rekey the appropriate vehicle.

#### b. **Simulated Battle Damage Assessment (SBDA).**

(1) SBDA is used to further activate the task force maintenance system. It monitors the procedural steps taken by the task force to return damaged vehicles to a serviceable status.

(2) SAWE/MILES II generates four possible damage states when a system is successfully engaged by the enemy.

- (a) Commo kill.
- (b) Mobility kill.
- (c) Firepower kill.
- (d) Catastrophic kill.

(e) A fifth condition is the "cheat kill" that occurs when the crew violates a restriction placed on them due to the first three categories. An SBDA card will assign fault symptoms and crew instructions for each damage state. The SBDA card will be issued to the vehicle TC in a sealed envelope at O/C linkup. Upon activation of the MILES system, the TC will open the envelope and activate the SBDA card, based on the type of kill assessed. Faults will be either organizational or DS level.

(3) The vehicle TC utilizes training DA Form 2404. If the damage requires DS level repair, training DA Form 5504 or DA Form 2407 is used. Crews correctly complete the DA Form 2404, with the faults noted from the play card. Maintenance personnel correctly complete the DA Form 5504 or equivalent ULLS form with the appropriate faults and action required for submission to the Direct Support Maintenance Company. If parts are required, training DA Form 2765-1 is submitted. The DA Form 2765-1 replicates the part needed. Record training on all DA

Forms 2765-1 used for repair of SBDA vehicles.

(4) All repair parts coming to the player unit must be processed through the Tech Supply Office located in the BSA.

(5) If recovery/evacuation of the SBDA vehicle is necessary, the following conditions must be met:

(a) The recovery vehicle must have the appropriate equipment to recover the damaged vehicle, (i.e., tow bar and/or cables).

(b) Recovery may be accomplished by any vehicle capable of recovering the damaged vehicle IAW the -10s standards.

(c) Self-recovery is allowed if the assessed damage is appropriate (i.e., if the damage is a ramp on an M-113 or a turret traversing gear box on a tank, either vehicle can recover itself to the UMCP).

(d) If the vehicle requires recovery/evacuation for SBDA reasons, no disconnection of the drive train or actual attachment to the towing vehicle will occur. The damaged vehicle follows the recovering vehicle, with the towing equipment on board, at a safe distance (approximately 50 m) and at a safe towing speed (not to exceed 10 mph, except for M1 which is 5 mph).

(e) M-1 Tank Recovery.

1. Per USAREUR Supplement to AR 750-1, M-1 tanks require a brake vehicle when being towed. Brake Vehicles can be another M-88 or M-1.

2. When using M-1s for vehicle recovery, do not allow the rear of the tow or brake vehicle to face the rear of the disabled tank. Also ensure that the M-1s have a heat shield in place to perform the recovery mission. Appropriate provisions of paragraph 3b. (5)(d), above, apply.

(6) The lowest possible echelon of maintenance will conduct repairs as far forward as possible. Repair time per the O/C play card begins when:

(a) All forms are properly completed and processed.

(b) The appropriate mechanics are on site with the repair parts and Class IIIP supplies replicated by DA Forms 2765-1, necessary tools, technical manuals, and any required lift. SBDA repair activities will include proper transportation assets for parts and necessary Class III (B) and /or Class III (P).

(c) Mechanics must remain on site for required repair time. Once the repair time listed on the play card has elapsed, the O/C will verify paperwork and rekey vehicle, returning it to the unit. At this time, the mechanics may be released. *No wrench turning will actually occur on SBDA vehicles.*

(7) Maintenance conducted on equipment belonging to units currently deployed in the training exercise must be performed in the maneuver box or maneuver coordination area. Once a vehicle is evacuated outside of the maneuver box or MCA, it cannot be returned to the exercise. This includes vehicles removed to cantonment areas or HTA motor pools.

(8) All catastrophically destroyed vehicles conduct PMCS, NMC fault repair, rearm, and refuel before reconstitution. 'NMC repair' includes parts are ordered under a valid requisition, parts are on hand, necessary tools and POL are present, and a trained mechanic is present. 'Re-arm' includes a valid class V requisition and class V received and uploaded on the vehicle. 'Refuel' includes the vehicle having at least 7/8<sup>th</sup> of a tank of fuel.

**c. Material/Maintenance Reporting**

(1) Units will report their readiness status IAW their SOP. The unit Motor Officer / FSB SPO or representative will provide an updated copy of ULLS-G NMC Report or SAMS-2 AHN-O26 print to their O/Cs on a daily basis.

(2) Brigade Maintenance Meetings. Units will report their readiness IAW SOP. The BDE S4/FSB SPO will provide a current copy of any reports and current combat system status to Logistics O/Cs at the BDE maintenance meeting.

**8-5 Logistics/Supply:**

a. **General:** In order to monitor the logistical effort of the task force, data on instrumentation coding, ammunition status, and task organization of vehicles is required.

b. **CL IX.** TFs/Separate Companies will provide a daily status of requisitions initiated to their respective O/Cs in a format that breaks down information by company team, by priority (02/03, 05/06, 12/13). Additionally, ULLS/SARSS CL IX reports may be required by O/Cs. The tech supply will provide a daily status of all requisitions processed and passed to their respective

O/C in a format that breaks down the information by CO/TM by priority.

c. **Instrumentation Coding.** Tracked vehicles and selected-wheeled vehicles will have an instrumentation package that electronically links the vehicle with the main computer. This package is called a PLAYER UNIT. The S4 will provide a PLAYER UNIT serial number, unit bumper number, and the vehicle function list (i.e., CTCP, primary BAS, 1st platoon leader, etc.) to the O/C at initial link-up/safety briefing prior to move out for STX training. Vehicle bumper numbers are not changed after the vehicles pass through the instrumentation station.

d. **Ammunition Status.** Prior to the start of the ESX, the task force uploads its ammunition, both simulated rounds and paper replicated munitions. The upload of the initial Combat Basic Load (CBL) for the unit is processed through the Ammunition Transfer Point (ATP) and transported by the unit IAW the rules of engagement outlined in the following paragraphs.

(1) The S4 or Support Platoon Leader provides the O/Cs with data pertaining to the total amount, by type, of ammunition allocated, issued, and the location of the ammunition. This is done in accordance with the unit basic load.

(2) If an additional allocation of ammunition is issued to the unit, the S4 will provide the O/Cs with updated information as appropriate. The Vampire O/C Team will control MLRS and M109A6 ammunition as required.

e. **Task Organization Of Vehicles.** The S4 provides data on the task organization and types of vehicles that are located within the task force. This chart is completed prior to deployment to the ESX.

**8-6 Ammunition:**

a. **Ammunition Concept.**

(1) The Division Ammunition Office (DAO) must sign for and draw the total ammunition allocation, to include Class IV and Class V barrier material, for all assigned, attached, and supporting units of the Brigade Combat Team (BCT) for the rotation.

(2) The Division/HICON will establish an ammunition holding area in the HTA CLASS IV yard to replicate the Corps Storage Area (CSA). The Division/HICON will hand receipt for the storage area from

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HTA Base Operations and man the site from DISCOM or Corps assets with DAO supervision.

(3) Additional allocations of ammunition can be requested for planned tactical operations as well as the requisition of ammunition for immediate consumption. These must be requested through operational channels and approved by the DTOC before ammunition is issued from the CSA.

(4) All ammunition issued to the Brigade Combat Team, less mines, must flow through the Ammunition Transfer Point (ATP) in the Brigade Support Area (BSA). Ammunition resupply following the initial issue will be pushed from the CSA to the ATP, based on the CSR published in the Division OPORD. Units will secure and transport training ammunition IAW Army Materiel Command Tactical Vehicle Upload Plans and the unit SOP.

(5) The DAO will issue ammunition to customers at the ATP, based on approved DA Forms 581 signed by the Brigade S4 or his designated representative.

### b. **Planning Requirements / Coordination For Ammunition Support.**

(1) CMTC will issue training ammunition (to the BLUFOR unit) in the form of simulators, ammunition containers, and paper ammunition. See Table H-4 for categories of ammunition corresponding to simulators and containers. Using units will use training ammunition (Blanks; Pyrotechnics; Flares; Smoke; Simulators INERT loaded projectiles, propellants, mines, simulated containerized weapon systems) and paper ammunition to replicate "live" ammunition. Units will draw blanks, pyrotechnics, smoke and simulator ammunition from ASP#2 and coordinate with the CMTC Training Support Division (TSD) for issues of INERT loaded projectiles, propellant, mines, containerized weapon systems and cartridges, and class IV materials.

(2) Ammunition, simulators, containers, and other appropriate training devices will be stored at the CSA for eventual delivery or issue to using units in the form of a CSR or approved DA Form 581. Issue and turn-in procedures will be IAW the TSD SOP.

(3) Units will be required to transport the training ammunition containers when

rearming the Brigade with ammunition for which training containers are provided. The using units will furnish the necessary transportation, personnel, and MHE for handling of training ammunition containers.

(4) TSD will issue paint to units to paint ATWESS ROUNDS.

(a) ATWESS rounds must be color coded to differentiate between AT-4, Dragon, TOW, Chaparral, and Stinger rounds. ATWESS rounds are to be color coded at the CSA prior to issue or transport to the forward units. Any improperly color-coded ATWESS devices will automatically be assessed as DUDS and must be removed from the battlefield and returned to the CSA.

(b) The standard color codes are:

Color	Weapon System
Red	TOW Missile
Yellow	AT-4 Rocket
Green	Dragon Missile
Blue	Stinger Missile

**Table 8-1. ATWESS Color Codes.**

(c) When painting the ATWESS rounds, do not paint over the printed nomenclature and DODAC or the ends of the rounds. Place only one small dot of the proper color on the rear of the round. Black paint will be used only to paint over multiple colored rounds.

(5) TSD will issue all paper ammunition to the DAO representative at the CSA. The DAO representative will then issue appropriate paper ammo and an accompanying DA Form 581 for all ammunition issues.

(6) Ammunition boxes and training devices must be returned in the course of the ESX or at end of mission. Damaged boxes will be repaired by using units.

(7) HTA Base Operations will inspect and clear the CSA prior to the Brigade (BLUFOR units) departing CMTC.

### c. **Ammunition Handling.**

(1) All training simulators (ATWESS and HOFFMAN) devices and training ammunition containers must be treated as if they had the same weight and cube as the rounds that they represent. The appropriate transportation assets must be utilized to

move ammunition during any resupply of ammunition (Tables 5,6, & 7 to Chapter 8).

(2) Using unit vehicles cannot exceed their carrying capacity (weight and cube) in moving ammunition (Tables 5, 6, & 7 to Chapter 8). Vehicles violating their carrying capacity will automatically receive a simulated battle damage (SBDA) assessment by the O/Cs. If the vehicle is considered to be catastrophically destroyed then the vehicle and its cargo must undergo complete replacement procedures before the cargo can be delivered. O/Cs will confiscate excess ammunition carried by vehicles or individuals. Convoys arriving at units with ammunition in excess of the vehicle carrying capacity will be confiscated by O/Cs as never having arrived at the unit. Class V confiscated from the convoy will be designated as still being at its original location prior to convoy. Units may send appropriate vehicles back to recover Class V if the unit desires.

(3) When handling ammunition by hand, all ammunition must be handled by enough personnel to move it (e.g., a man who can ordinarily lift only one tank main gun round is allowed to lift one HOFFMAN Simulator). Dismounted soldiers may not carry more than one Dragon, one TOW, one Javelin, two AT-4s, or one Stinger ATWESS cartridge per person. O/Cs will confiscate excess ammunition carried by individuals in violation of this rule (see Table H-5). This limit includes ATWESS loaded in the weapon.

(4) If material handling equipment (MHE) is not available, the vehicle will be hand loaded using a ratio of one-man-load per minute (e.g. it will take one man 60 minutes to load 60 rounds of 120 mm HEAT into a 2 1/2-ton truck).

**d. DAO Representative and ATP Personnel Procedures.**

(1) Issue approved ammunition (simulators, paper ammunition, training containers) that has been properly requested. DA Form 581 (Request for Issue or Turn-in of Ammunition) will be used for requisitioning all ammunition/explosives (simulators, paper ammunition, training containers) from the CSA or ATP.

(2) Issue only properly color-coded ATWESS. The DAO representative is responsible for ensuring that ATWESS are

properly color-coded prior to issue to the forward units.

(3) Issue approved quantities of ammunition to the forward units when the forward units have the required number of vehicles, so as not to exceed their carrying capacity. The DAO representative is responsible for ensuring that using unit vehicles do not exceed their carrying capacity.

(4) Ensure that using units return training ammunition containers. All training ammunition containers will be returned to the CSA regardless of the condition, and will not be turned in or disposed of except to the TSD.

(5) When training ammunition containers are returned to the ATP on using unit vehicles, the containers must be downloaded or cross-loaded to an S&P for backhaul to the CSA before the using unit vehicle can be used for reload of ammunition.

(6) Ensure that all ammunition handling is in compliance with the EXROE.

**e. Ammunition Initial Issue And Resupply To Using Units.**

(1) For initial upload, units must account for and document ammunition down to Company/Team, specialty platoon, and attachment level by DA Form 5515-R or DA Form 581. If an audit trail is not established, the initial upload will not be allowed by the O/C. NOTE: Initial issue should be 100% of UBL. Subsequent issue is based on unit CSR.

(2) All resupplies above the initial upload must be conducted utilizing boxes, containers, and canisters that accompany the type ammunition and corresponding number of simulators. A complete resupply transaction will include:

(a) Requisition (DA Form 581)

(b) Re-supply containers.

(c) Simulators or paper ammunition.

(d) Appropriate transportation.

(3) Training containers will be used only for resupply during the ESX. Training containers will not be utilized for the supply of the initial issue ammunition for the unit prior to the start of the ESX (Day E-2).

**f. Ammunition Storage.**

(1) 25-mm rounds over the 300 ready box capacity are stowed in canisters in proper location.



(a) TOW, Dragon, Javelin and AT-4 training rounds must be stowed in racks.

(b) Maximum of 7 rounds on M2 (combination Dragon and TOW).

(c) Maximum of 12 rounds on M3 (combination Dragon and TOW).

(2) Stinger teams must carry boxes until rounds are fired.

(3) The correct ATWESS weapon system must be utilized. Color-coding must be in effect; O/Cs will confiscate improperly utilized or improperly color-coded ammunition.

g. Ammunition Storage: Units that plan, resource and execute tactical storage of Class V, or Caches must insure the following is met:

(1) An OC must observe the emplacement of the Cache with appropriate methods.

(2) BLUFOR must request the ammunition or use UBL.

(3) The Cache will be replicated by inert ammunition and/or paper ammunition in a container in a marked off area at the cache site (white engineer tape).

(4) Caches found by the OPFOR can be destroyed by notifying the covering OC Team through the DTOC.

(5) This does not apply to Bulk Storage or Cache Points as stated in Para 4-12.i.

**8-7 ROM Operations:**

a. ROM operation will be conducted IAW the USAREUR ROM SOP.

b. All units/vehicles participating in ROM operations will move from the TAA to the RP along the TF route of march.

c. Any augmentation support (MSB or COSCOM Unit) for ROM operations must be safety briefed and have MILES.

d. All units/vehicles that fail to follow the TF route of march are subject to being returned to the TAA by an O/C.

e. All fuel tankers will have a spill kit conforming to the 282<sup>nd</sup> BSB SOP for tactical refueling at the CMTC.

Figure 8-1. Vehicle Replacement Card

VEHICLE REPLACEMENT CARD		
UNIT: _____ _____		
VEHICLE TYPE: _____ _____		
O/C CERTIFICATION: _____ _____		
(O/C	ROSTER	#):

**Table 8-4. Ammunition Categories.**

Category	How Replicated	Type Ammo	Simulator
A	Containers with simulators	120mm Tank TOW DRAGON Stinger Viper 165mm (Eng)	HOFFMAN ATWESS ATWESS ATWESS ATWESS HOFFMAN
B	Containers with training devices	81mm MORTAR 60mm MORTAR	INERT ROUND INERT ROUND
C	Containers with paper	20mm 25mm 107mm MORTAR MICLIC 155mm ARTY POWDER	PAPER PAPER PAPER PAPER PAPER
D	Blank Ammunition	5.56mm 7.62mm .50 Cal SAW (5.56mm)	BLANK BLANK BLANK BLANK
E	Paper Ammunition	120mm MORTAR 105mm ARTY Demo Kits Bangalore Mines	PAPER PAPER PAPER PAPER
F	NA	155mm ARTY	HOFFMAN

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Type Ammo	Rds/Box	Wt/Rd (lbs.)	Wt/Box (lbs.)
20mm	100	1	93
25mm	50	2	50
Viper	12	9	117
Stinger	1	35	89
Dragon	1	67	67
TOW	1	97	97
60mm Mortar	10	4.5	49
81mm Mortar	3	17	51
107mm Mortar	2	35	70
120mm Mortar	1	67	67
165mm (CEV)	1	94	94
MICLIC	1	200	200
120mm (Tank)	1	63	63
2.75 RKT MPSM	4	40	160
2.75 RKT HE	4	35	140
2.75 RKT SMK	4	35	140
2.75 RKT ILLUM	4	44	176
Hellfire	1	185	185
Javelin	1	35	50

**Table 8-5. Ammunition Weights (Round/Box).**

Type Ammo	Boxes/Pallet	Wt/Box or Missile	Wt/Pallet
20mm	27	50 lbs.	1350 lbs.
25mm	24	90 lbs.	2160 lbs.
120mm	30	69.9 lbs.	2049 lbs.
4.2 wooden box	20	70 lbs.	1400 lbs.
105mm	32	64 lbs.	2048 lbs.
TOW	12	89 lbs.	1068 lbs.
Dragon	9	67 lbs.	603 lbs.
Stinger	9	83 lbs.	749 lbs.
AT-4/Viper (5 per container)	4	112 lbs.	448 lbs.
2.75 RKT MPSM	15	160 lbs.	2400 lbs.
2.75 RKT HE	15	140 lbs.	2100 lbs.
2.75 RKT SMK	15	140 lbs.	2100 lbs.
2.75 RKT ILLUM	15	176 lbs.	2640 lbs.
Hellfire	9	185 lbs.	1665 lbs.
Javelin	9	50 lbs.	450 lbs.

**Table 8-6. Ammunition Weight (Boxes/Pallets)**

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The following tables are provided as planning guide only. Table data is based on FM 101-10-1. Actual amounts of upload will vary by loading configuration, and actual weights and cubes of different ammunition types.

Ammunition Type	# Pallets				
	2-½ Ton	5 Ton	10 Ton	½ Ton Trailer	22-½ Ton
1-(W) 120mm APDS-T	2	4	8	14	16
1-(M) 120mm APDS-T	2	4	8	14	16
1-(W) 120mm HEAT	2	4	8	14	16
1-(M) 120mm HEAT	2	4	8	14	16
1-105mm APDS-T	2	4	8	14	16
2-105mm HEAT	2	4	8	14	16
1-TOW	2	4	8	14	16
1-Dragon	2	4	8	14	16
1-Stinger	2	2	8	14	16
5-AT-4 (Viper)	2	4	8	14	16
100-20mm	3	4	8	14	16
30-25mm	3	4	8	14	16
2-4.2 HE	3	4	8	14	16
2-4.2 ILL	3	4	8	14	16
2-4.2 WP	3	4	8	14	16
M21 Mine	4	4	8	14	16
M15 Mine	4	4	8	14	16
M14 Mine	4	4	8	14	16
M62 Mine	4	4	8	14	16
2.75 RKT MPSM	1	2	4	0	10
2.75 RKT HE	2	3	6	0	14
2.75 RKT SMK	2	3	6	0	14
2.75 RKT ILLUM	2	3	6	0	14
Hellfire	1	2	4	0	7
30mm	6	6	8	0	12
Javelin	2	4	8	14	16

**Table 8-7. Vehicle Carrying Capacity.**

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### 8-8 O/C Control Measures:

#### a. Battle Rosters Numbers

(1) Maneuver Team "08/10" and "24" O/Cs observe personnel strength accounting, casualty and medical reporting. To accomplish this, battle rosters are used to track casualties on the battlefield. Casualties will be processed, treated, and evacuated IAW applicable doctrine. "Evacuation time" is determined IAW applicable doctrine and the MILES Casualty Cards.

(2) The Battle Roster Number (BRN) is a five (5) character alphanumeric designator which delineates the owning O/C team, O/C sub-unit, individual platoon and soldier. The BRN is placed on the SSN line of the MCC. In addition to the BRN, the O/C will place their call-sign and initials at the top center on the front side of the MCC. This will signify the soldier has received an O/C safety briefing. An example of a BRN is shown below:

Alphanumeric	Alphanumeric	#	#	#
<b>O/C Team</b> T = Timberwolf G = Grizzly W = Warhog M = Mustang V = Vampire A = Adler F = Falcon B = Bullseye	<b>CO/PLT O/C Team</b> 11 TM = 1 12 TM = 2 13 TM = 3 14 TM = 4 15 TM = 5 16 TM = 6 TOC = 0 CTCP = C FTCP = F SCTS = S MTRS = M MP = P BDE Chem = G SPT Ops = W	<b>Platoon</b>	<b>Individual Roster Number</b>	
<b>O/C Team</b> T = Timberwolf G = Grizzly W = Warhog M = Mustang V = Vampire A = Adler F = Falcon B = Bullseye	<b>CO/PLT O/C Team</b> 11 TM = 1 12 TM = 2 13 TM = 3 14 TM = 4 15 TM = 5 16 TM = 6 TOC = 0 CTCP = C FTCP = F SCTS = S MTRS = M MP = P BDE Chem = G SPT Ops = W	<b>Platoon</b>	<b>Individual Roster Number</b>	
T	3	3	1	1
"Timberwolf"	"13 Team"	"3d Platoon"	"Soldier # 11"	

**Figure 8-2 Battle Roster Identification**

(3) BRN is posted to the "SSN" line of the MILES Casualty Card (MCC). O/Cs will submit Battle Rosters to the TAF at the completion of unit link-up.

(4) Character place #1: This position delineates the owning O/C team and is derived from the first letter of the O/C team name. (Example; the letter "T" would be used for the Timberwolf O/C team)

(5) Character place #2: This position identifies the owning O/C team sub-unit and is derived from the second number of the team call-sign or from the list below for special units. Special codes are used when numbers within a team are duplicated. (Example: when the number "4" is used by both the 14 maneuver team and the 24 medical team, 24 uses a code).

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(6) Character place #3: This position identifies the platoon /section the individual soldier is assigned to. This number should coincide with the platoon (i.e.; 1st platoon would be "1"), if this is a headquarters platoon/section then use "0". In units where there are no numeric designators for the platoon/section the O/C will determine how to number the platoon (i.e.; Med company could use "1" for Treatment Plt. and "2" for Ambulance Plt.)

(7) Character place #4 & #5: This position identifies the individual soldier in the platoon identified in place #3. This number can range from "01" to "99". Most platoon / sections are not bigger than 99 personnel.

### b. Distribution of MCC:

(1) RTD:

- (a) all drivers
- (b) all track commanders
- (c) all key leaders

(2) The remaining soldiers receive the MCC IAW the following guidance:

- (a) KIA 25%
- (b) URGENT 25%
- (c) PRIORITY 25%
- (d) WOUNDED 25%

(3) BITE Cards (non-combat casualty). Issue standard MCCs with RED borders (to indicate a BITE versus normal combat casualty). Used to correct EXROE or safety violations. An O/C call sign will be placed on the MCC indicating the holder has received a safety briefing and accounted for by OPSGP. Write the O/C call sign on the upper center

c. **All SBDA's will be repaired in the Maneuver Box.** The following SBDA charts are based on the applicable TM Maintenance Allocation Charts (repair time is in hours):

M1/M1A1 MOBILITY KILL		
PART REPLACED	LEVEL	REPAIR TIME
<b>ENGINE:</b>		
Engine	DS	6.8
Power Pack	ORG	5.4
Compressor Assy Fwd Eng Mod	DS	6.0
Regenerator Assy Rear Eng Mod	DS	6.4
Rear Engine Subassembly	DS	8.2
Engine Oil Pump	ORG	7.3
<b>FUEL SYSTEM:</b>		
Main Fuel Control	ORG	1.0
Pump and Manifold Assy	ORG	1.3
Fuel Transfer Pump	ORG	1.4
<b>COOLING SYSTEM:</b>		
Fan and Drive Unit Left Hand	ORG	9.0
<b>ELECTRICAL SYSTEM:</b>		
Generator	ORG	1.5
Starter	ORG	0.7
Wiring Harness Branched 2W104	ORG	3.3
Batteries Storage	ORG	0.7
Power Cable Assy 2W103-9	ORG	2.5
<b>TRANSMISSION:</b>		
Transmission	ORG	13.2
Housing Oil Filter	DS	2.7
<b>FINAL DRIVE:</b>		
Final Drive Assembly	ORG	4.7
Shaft Assembly	DS	1.0
<b>SUSPENSION:</b>		
Roller Track Support Wheel	ORG	2.0
Track Assembly	ORG	3.4
Sprocket	ORG	5.8

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<b>M1/M1A1 FIREPOWER KILL</b>		
<b>TURRET</b>	<b>LEVEL</b>	<b>REPAIR TIME</b>
Gunner's Primary Sight Assy	ORG	6.0
Cdr's Control Assy	ORG	0.4
Gunner's Control Assy	ORG	0.4
Gun Tube	DS	3.9
Breech	DS	10.7
Gun Mount Rotor	DS	31.0
Tank Commander's Panel	ORG	0.4

<b>M2, M20DS, M3, M3A1 MOBILITY KILL</b>		
<b>PART REPLACED</b>	<b>LEVEL</b>	<b>REPAIR TIME</b>
<b>ENGINE:</b>		
Engine	DS	7.8
Turbocharger	ORG	6.2
Flywheel	DS	2.5
Engine Oil Cooler	ORG	10.1
Air Cleaner	ORG	7.9
<b>FUEL SYSTEM:</b>		
Fuel Pump	DS	1.0
Fuel Injector	DS	2.4
Fuel Separator	ORG	1.0
Cylinder Head Diesel	DS	6.1
<b>COOLING SYSTEM:</b>		
Radiator	ORG	7.4
<b>ELECTRICAL SYSTEM</b>		
Power takeoff Cable Xmission	ORG	5.4
Alternator	ORG	1.4
Generator & Harness Assy	ORG	0.6
Cable Assy 3W2	ORG	1.0
Battery Storage	ORG	2.5
Starter	ORG	1.9
Wire Harness 1W18 Cable	ORG	3.6
Wire Harness 1W17 Cable	ORG	7.3
<b>TRANSFERS &amp; FINAL DRIVES:</b>		
Final Drive Assy	ORG	4.6
<b>HULL &amp; SUSPENSION</b>		
Drive Sprocket	ORG	2.4
Idler Arm Assy	ORG	2.6

<b>M2, M20DS, M3, M3A1 FIREPOWER KILL</b>		
<b>PARTS REPLACED</b>	<b>LEVEL</b>	<b>REPAIR TIME</b>
<b>TOW:</b>		
TOW Elevation Servo Amp	DS	1.0
Launcher Assy	DS	1.3
Board-Ear Assy	DS	2.6
Elevation Drive Motor	ORG	3.2
Cable Assy 2W134	ORG	3.9
Integrated Sight	DS	2.2
Armament Control Unit	DS	0.7
TOW Control Box	ORG	1.9
Basic Sight Assy	DS	3.8
TOW elevation Drive Gearbox	ORG	9.3
<b>25MM:</b>		
Ammunition Can Assy 25MM	DS	8.7
Chute Assy 25MM AP & HE	ORG	0.3
<b>TURRET:</b>		
Mechanical Scanner Assy	DS	3.8

<b>M109A6 Howitzer MOBILITY KILL</b>		
<b>PART REPLACED</b>	<b>LEVEL</b>	<b>REPAIR TIME</b>
<b>ENGINE:</b>		
Engine	DS	8.0
Oil filter	ORG	0.5

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<b>M109A6 Howitzer MOBILITY KILL</b>		
<b>PART REPLACED</b>	<b>LEVEL</b>	<b>REPAIR TIME</b>
Cylinder Head	DS	2.8
Vibration Damper	DS	0.5
Valves	DS	1.0
<b>FUEL SYSTEM:</b>		
Fuel Pump	ORG	1.0
Fuel Tank	DS	10.0
Injector Pump	ORG	0.2
Injector Fuel	DS	0.2
<b>ELECTRICAL SYSTEM</b>		
Starter Relay	ORG	0.2
Starter	ORG	1.0
Wiring Harness, Bulkhead	DS	2.0
Wiring Harness, Power Lead	DS	2.0
<b>TRANSMISSION:</b>		
Shifter Linkage	ORG	3.6
Transmission Assembly	DS	5.0
<b>FINAL DRIVE:</b>		
Transfer	DS	1.0
Final Drive Assembly	ORG	2.5
<b>SUSPENSION:</b>		
Arm and Hub Assembly, Road Wheel	ORG	1.0
Idler Arm	ORG	1.0
Torsion Bar	ORG	1.0

<b>M109A6 Howitzer FIREPOWER KILL</b>		
<b>PARTS REPLACED</b>	<b>LEVEL</b>	<b>REPAIR TIME</b>
<b>TURRET:</b>		
Circuit Breaker	ORG	0.3
Bypass Valve Assembly	ORG	0.5
breach Mechanism	DS	6.0
Tube Assembly	DS	1.0

<b>M113 Series (M113A2, M557, M1064, M981) MOBILITY KILL</b>		
<b>PARTS REPLACED</b>	<b>LEVEL</b>	<b>REPAIR TIME</b>
<b>ENGINE:</b>		
Engine	DS	12.6
Head Cylinder	DS	6.5
Flywheel	DS	10.8
Rocker Arm	DS	7.6
<b>FUEL SYSTEM:</b>		
Fuel Pump Engine	DS	0.9
Fuel tank	ORG	1.0
Cross Shaft Assy	ORG	0.5
<b>COOLING SYSTEM:</b>		
Radiator	ORG	3.0
Coolant Pump	ORG	1.2
<b>ELECTRICAL SYSTEM:</b>		
Generator	ORG	1.2
Wiring Harness	DS	3.5
Battery	ORG	0.5
<b>TRANSMISSION:</b>		
Transmission Assy	DS	10.0
<b>TRANSFERS:</b>		
Transfer Gearcase	DS	12.4
<b>DIFFERENTIAL:</b>		
Final Drive	ORG	1.6
<b>SUSPENSION:</b>		
Torsion Bar	ORG	0.9
Idler Wheel	ORG	2.3
Drive Sprocket	ORG	0.5



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<b>M981 FISTV FIREPOWER KILL</b>		
<b>PARTS REPLACED</b>	<b>LEVEL</b>	<b>REPAIR TIME</b>
Wiring Harness Branched: Turret W1	DS	8.0
G/VLLD Carrier Assy	ORG	1.5
Accumulator Hydraulic	ORG	3.0
Motor, Hydraulic	ORG	1.5
Erection Arm Assy	DS	27.0
Chain Components, Erection Arm	ORG	4.0

<b>M998 Series MOBILITY KILL</b>		
<b>PART REPLACED</b>	<b>LEVEL</b>	<b>REPAIR TIME</b>
<b>ENGINE:</b>		
Engine	DS	9.0
Fly Wheel	DS	3.5
Oil Cooler Assy and Liners	ORG	2.3
<b>COOLING SYSTEM:</b>		
Water Pump	DS	3.5
Cooling System Complete	ORG/D S	18.9/3.5
<b>ELECTRICAL SYSTEM:</b>		
Starter	ORG	1.9
Battery & Cables	ORG	2.4
Wiring Harness Body	DS	3.5
<b>TRANSMISSION:</b>		
Transmission Assy	DS	5.8
<b>FRONT &amp; REAR AXLE:</b>		
Halfshaft	ORG	2.2
Differential Assy	DS	5.0
Ball Joint Upper & Lower	ORG	0.6
<b>BRAKES/WHEELS/STEERING COLUMN/FRAME:</b>		
Master Cylinder	ORG	0.5
Pads Front & Rear	ORG	1.0
Rotor Front & Rear	ORG	1.2
Steering Column	ORG	1.8
Power Steering Pump	ORG	1.0
Crossmembers, Brackets&Supports	DS	4.5